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Superfund Technical Assessment & Response Team V
EPA CONTRACT 68HE0319D0004

October 19, 2020

Mr. Peter Lisichenko, On-Scene Coordinator
U.S. Environmental Protection Agency, Region II
Superfund and Emergency Management Division
2890 Woodbridge Avenue
Edison, NJ 08837

EPA CONTRACT No: 68HE0319D0004
TD No: TO-0036-0073
DC No: STARTV-02-D-0057
SUBJECT: SITE-SPECIFIC COMMUNITY AIR MONITORING PLAN
738 UPPER MOUNTAIN ROAD
LEWISTON, NIAGARA COUNTY, YORK

Dear Mr. Lisichenko,

Enclosed please find the Site-Specific Community Air Monitoring Plan (CAMP), for the Removal Action to be performed at the 738 Upper Mountain Road Site located in Lewiston, Niagara County, New York. This plan covers the air monitoring and sampling activities to be conducted at the Site beginning October 26, 2020.

If you have any questions or comments, please do not hesitate to contact me at (732) 425-1175.

Sincerely,

WESTON SOLUTIONS, INC.

A handwritten signature in black ink, appearing to read "Sean Quinn", is written over a light gray rectangular background.

Sean Quinn
START V Site Project Manager

Enclosure
cc: TDD File No.: TO-0036-0073



SITE-SPECIFIC COMMUNITY AIR MONITORING PLAN

738 UPPER MOUNTAIN ROAD SITE

Lewiston, Niagara County, New York

Site Code: A23N

CERCLIS Code: NYN000206697

Prepared by:

Superfund Technical Assessment & Response Team V
Weston Solutions, Inc.
Federal East Division
Edison, New Jersey 08837

Prepared for:

U.S. Environmental Protection Agency, Region II
Superfund and Emergency Management Division
2890 Woodbridge Avenue
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Attachment A: Area of Concern Map

Attachment B: EPA Air Sampling Forms

- RADēCO Model H-810 Calibration Functional Check Form F001
- Sample Control Form and Chain of Custody Form F002
- Personnel Air Monitoring and Exposure Estimate Form F003

1.0 INTRODUCTION

This Site-Specific Community Air Monitoring Plan (CAMP) has been prepared for the Removal Action to be implemented at the 738 Upper Mountain Road site (the Site) beginning on October 26, 2020. The Site is situated at 738 Upper Mountain Road in Lewiston, New York and the geographic coordinates are 43.15553, -79.02245. The Site consists of a small area of concern (AOC) with radionuclide contamination approximately 1,493 square feet (ft²), and is located on the vacant, approximately 10.2-acre parcel 115.08-1-27 owned by Talarico Bros. Building Corp (TBBC). The AOC is located at the entrance of the driveway currently utilized by the 738 Upper Mountain Road residence although the driveway was historically used as an access road to the vacant TBBC property. The residence is on a separate property from the AOC. The Site is bordered to the north by Upper Mountain Road, residential properties, and a further wooded area; to the east and west by residential properties; and to the south by a wooded area.

In July 1985, members of the Radiological Survey Activities (RASA) group at Oak Ridge National Laboratory (ORNL) performed a radiological survey of 738 Upper Mountain Road and documented a maximum gamma exposure rate of 710 microrentgens per hour (μ R/hr). The area where this reading was collected is approximately 10 feet wide by 59 feet in length along a ditch and gravel residential driveway. The survey showed that the 738 Upper Mountain Road anomaly is associated with the asphalt driveway that contained a phosphate slag material. This rocky-slag waste material was used for bedding under asphalt surfaces and in general gravel applications at the Site and 61 other locations in the Niagara Falls area identified by ORNL.

Biased surface soil samples collected in conjunction with the study indicated the presence of radium (Ra)-226, uranium (U)-238, and thorium (Th)-232 at the Site. The subsequent November 1986 report stated that all the contaminated soil and rock samples collected had approximately equal concentrations of Ra-226 and U-238, which suggests that the rocks probably originated from a singular source. The origin of the thorium-bearing material was unknown; the report postulated that its source was from some type of mineral extraction activity in the Niagara Falls area. The report stated that the 738 Upper Mountain Road anomaly was not related to materials connected with Niagara Falls Storage Site (NFSS), including materials that were transported to NFSS.

During a reconnaissance performed by the New York State Department of Health (NYSDOH) and New York State Department of Environmental Conservation (NYSDEC) on July 9, 2013, screening activities showed radiation levels at 300 μ R/hr with a hand-held pressurized ion chamber (PIC) and 105,000 to 110,000 counts per minute (cpm) with a sodium iodide (NaI) 2x2 scintillation detector; the singular reading was taken at the end of the driveway adjacent to Upper Mountain Road.

On December 12, 2013, Weston Solutions, Inc., Site Assessment Team (SAT), currently Superfund Technical Assessment & Response Team V (START V), collected a total of nine soil samples and two slag samples from the Site. At each sample location, soil samples were collected directly beneath slag material; at locations where a radioactive layer was not present the soil sample was collected at the equivalent depth interval. The slag samples consisted of pulverized silty sand with rocks, cobbles, and gravel (*i.e.*, radioactive waste material mixture) rather than singular pieces of slag. The soil and slag samples, and aqueous rinsate blank, were analyzed for target analyte list (TAL) metals, including mercury; isotopic thorium, isotopic uranium, Ra-226, and Ra-228 by alpha spectroscopy; and other radioisotopes by gamma spectroscopy. Analytical

results indicated concentrations of radionuclides found in the slag and soil to be significantly higher than at background conditions.

On May 1 and 2, 2014, SAT collected radon and thoron concentration measurements from locations on and in the vicinity of the Site. The radon and thoron measurements were collected at heights of one meter above the ground surface. During the May 2014 air monitoring event, background radon concentrations were measured at 0.16 +/- 0.13 picocuries per liter (pCi/L) (to account for maximum background concentrations, the uncertainty value is added to the background measurement for an adjusted concentration of 0.29 pCi/L) during the morning hours on May 2, 2014 and an adjusted value of 0.12 pCi/L during the afternoon hours on May 1, 2014. Background thoron concentrations were calculated to be 0.060 pCi/L (adjusted concentration) during the morning hours on May 2, 2014 and an adjusted value of 0.15 pCi/L during the afternoon hours on May 1, 2014. There were no radon or thoron concentrations that exceeded the site-specific background, nor were there any adjusted concentrations that equaled or exceeded a value two standard deviations above the mean site-specific background concentrations for these radionuclides in ambient air.

On October 25, 2016, EPA and Weston Solutions, Inc., Removal Support Team 3 (RST 3), currently START V, conducted radiological survey inside the one residence located in proximity to the AOC and exterior areas of the Site. A hand-held NaI 3x3 scintillator attached to a Ludlum-2241 gamma meter was utilized to conduct radiological survey in the residence, and an all-terrain vehicle (ATV) with a Ludlum-2241 and NaI 3x3 scintillator setup connected to a wireless network-based communication system was utilized to conduct mobile ground radiological survey throughout the Site and areas surrounding the residence. Gamma readings collected within the residence were at background levels (10 to 12 μ R/hr). Exterior gamma reading generally ranged from background to less than three-time (3x) background except at a small area of the driveway entrance currently utilized by the 738 Upper Mountain Road residence where gamma readings were as high as 462.2 μ R/hr.

On November 18, 2016, EPA and RST 3 continued Removal Assessment activities at the Site. Based on radiological survey measurements collected during the October 2016 Removal Assessment event, test pits were advanced on-site to depths of 2 feet below ground surface (bgs) at four locations selected by EPA. A total of 17 heterogeneous samples of soil/slag/rock, including quality assurance/quality control (QA/QC) samples, were collected from the side walls of each test pit at 6 inch intervals from 0 to 6, 6 to 12, 12 to 18, 18 to 24 inches bgs.

In December 2016, RST 3 utilized a High-purity Germanium (HPGe) detector to perform quantitative gamma spectrometry analysis of the heterogeneous samples of soil/slag/rock collected from the Site in November 2016. Subsequently, all the heterogeneous samples of soil/slag/rock were submitted to the assigned laboratory for bismuth (Bi)-212, cesium (Cs)-137, potassium (K)-40, lead (Pb)-212, protactinium (Pa)-234, Ra-226, Ra-228, Th-228, Th-230, Th-232, Th-234, thallium (Tl)-208, U-233/234, U235/236, U235, and U238, analyses. The analytical results were compared with the Site-Specific Action Levels (SSALs) established by EPA in March 2019 for the target radioisotopes. Based on analytical results, the concentrations of Pa-234M and Th-228 exceeded the respective EPA SSALs in nine samples with exceedance concentrations identified in at least one depth interval from 0 to 24 inches bgs at all four test pit locations. In addition, the concentrations of Bi-212, Pb-212, Ra-226, Ra-228, Tl-208, Th-230, Th-232, Th-234, U-233/234, and U-238, exceeded the EPA SSALs in all the samples collected from one particular test pit

location. Furthermore, analytical and radiological survey results were utilized to estimate the volume of contaminated soil in the AOC. The vertical extent of the radiological contamination was estimated at 2 feet bgs based on radionuclide exceedance concentrations from analytical results, and the impacted surface area was estimated at 128.11 square meters (1,378.98 square feet) based on radiological survey results where gamma readings exceeded 3x background. Approximately 102.15 cubic yards of contaminated soil is estimated to be present at the AOC on-site.

On August 11 through 14, 2017, personnel from RST 3-Procured National Radon Safety Board (NRSB)-certified Company, Accu-View Property Inspections (Accu-View), performed radon sampling in the one residence located in proximity to the AOC. A total of eight activated charcoal canisters (radon canisters), including one field duplicate (co-located canister), were deployed for radon sampling at the residence. When compared with the EPA Action Level of 4.0 pCi/L for radon, analytical results indicated radon concentrations were below the EPA Action Level.

On October 22, 2019, START V visited the facility of a fill material vendor, New Enterprise Stone & Lime Co. Inc., and collected four grab clean fill samples, including one field duplicate, and two composite clean fill samples, including one field duplicate, from a fill material stockpile located on the facility. All the clean fill samples were submitted to the assigned laboratories for TAL Volatile Organic Compounds (VOCs), TAL Semivolatile Organic Compounds (SVOCs), TAL pesticides, and TAL Polychlorinated Biphenyls (PCBs), TAL metals including mercury (Hg), cyanide (CN), gamma spectrometry, alpha spectrometry, and isotopic uranium and thorium, analyses.

Analytical results indicated that, TCL VOCs, TCL SVOCs, TCL pesticides, and TCL PCBs, TAL metals including mercury, cyanide, and target radionuclides, were either not detected, or detected at concentrations well below their respective EPA Removal Management Level (RMLs), NYSDEC Unrestricted Use Soil Cleanup Objectives (UUSCOs), and the Site Specific Action Level (SSALs) for target radionuclides.

On October 23, 2019, START V utilized dedicated stainless-steel hand augers to advance one soil boring at the on-site AOC to a depth of 24 inches bgs. Two disposal soil samples, including one field duplicate, were collected from the boring at depths 0 to 12 inches bgs and one disposal soil sample was collected from the boring at depths 12 to 24 inches bgs. The disposal soil samples comprised of soil/slag/rocks. All the disposal soil samples were submitted to the assigned laboratories for TCL VOCs, TCL SVOCs, TCL pesticides, and TCL PCBs, TAL metals including mercury, cyanide, gamma spectrometry, alpha spectrometry, and isotopic uranium and thorium, Toxicity Characteristic Leaching Procedure (TCLP) VOCs, TCLP SVOCs, and TCLP pesticides, TCLP herbicides, and TCLP metals including mercury, analyses. Analytical results of the disposal soil samples were compared with EPA RMLs for residential soil, EPA SSALs for the target radioisotopes, and EPA Maximum Concentration of Contaminants (MCCs) for the toxicity characteristic as determined by TCLP. Analytical results indicated that, TCL VOCs, TCL SVOCs, TCL pesticides, and TCL PCBs, TAL metals including, mercury and cyanide, target radionuclides, TCLP VOCs, TCLP SVOCs, and TCLP pesticides, TCLP herbicides, and TCLP metals including mercury, were either not detected, or detected at concentrations well below their respective EPA RMLs, SSALs for target radionuclides, and EPA MCCs. Reactive cyanide, reactive sulfide, and burn rate were negative, and soil pH at depth 0 to 24 inches bgs was slightly basic at 8.6.

Utilizing a Ludlum-2241 and NaI Scintillator setup, EPA collected gamma readings at the second access road area of the TBBC property located between the 786 Upper Mountain Road and 776 Upper Mountain Road properties in order to verify that there were no slag deposits near the roadway similar to the access road currently utilized by the 738 Upper Mountain Road property. Gamma readings around the second access road of the TBBC property was within background levels, approximately 8,000 cpm.

1.1 Community Air Monitoring Program Objectives

The primary contaminants of concern in on-site soils are radioactive materials from the decay process of uranium and thorium, which have been identified at concentrations exceeding the EPA Site-Specific Preliminary Remediation Goals (PRGs) for soil.

Uranium (half-life of 4.5 billion years) is a naturally occurring radioactive isotope, decaying primarily by alpha emission with accompanying gamma. Uranium produces several radioactive isotopes including radium-226 (Ra-226) and radon-222 (Rn-222), which have a half-life of 1,602 years and 3.8 days, respectively. Rn-222 is a radioactive isotope which naturally occurs as a gas, producing several radioactive radon decay products, including polonium-218, lead-214, bismuth-214, and polonium-214.

Thorium (half-life of 14 billion years) is a naturally occurring radioactive isotope, decaying primarily by alpha emissions with accompanying gamma. Thorium produces several radioactive isotopes, including gamma emitting actinium-228 (Ac-228), lead-212 (Pb-212), bismuth-212 (Bi-212), radium-224 (Ra-224), and thoron-220 gas (Rn-220). Ra-224 and Rn-220 have a half-life of 3.6 days and 55 seconds, respectively.

The selected remedy for the Removal Action is the excavation and off-site disposal of contaminated soils. Work zone activities at the Site will include, but are not limited to, excavation of subsurface radioactive soils along a ditch and gravel driveway and activities involving the loading and transporting of the contaminated soils for off-site disposal. Since Site activities could generate dust which may potentially contain elevated concentrations of radioactive particulates, the following objectives have been set for the Site air monitoring program:

- Establish Site-Specific Action Levels for dust/Site contaminants;
- Continuously monitor dust particulate concentrations in air to ensure that off-site migration of contaminants remains below the Site-Specific Action Levels;
- Collect confirmation dust particulate samples for radioactivity analysis to ensure that unhealthy levels of these contaminants are not exceeded in the ambient air; and
- Establish corrective actions to be taken in the event that temporary exceedances of Site-Specific Action Levels are experienced.

This Site-Specific CAMP outlines the air quality monitoring and sampling procedures to be followed to protect on-site personnel and the surrounding community from potential airborne contaminant releases during the implementation of the Removal Action.

2.0 PERIMETER AND COMMUNITY AIR MONITORING

2.1 Air Monitoring Procedures

Air monitoring activities will be conducted in accordance with the procedures outlined within the EPA guidance document entitled, *“Superfund Program Representative Sampling Guidance, Volume 2: Air (Short-Term Monitoring), Interim Final. 1995. EPA 540/R-95/140. (OSWER Directive 9360.4-09, PB 96-963206).”* Appropriate activities as outlined within this document include the monitoring necessary to ensure appropriate Health & Safety levels for protection of on-site personnel and to ensure that the surrounding community is not exposed to site-related constituents at concentrations above the Site-Specific Action Levels.

Particulate air monitors (e.g., DataRAMs or equivalent) equipped with PM₁₀ (particulate matter smaller than 10 microns in diameter) detectors will be used to monitor dust levels throughout the duration of the Removal Action. The monitors will be operated each workday and will measure PM₁₀ dust concentrations in real time. The monitors are calibrated by the equipment manufacturer prior to being used at the Site. Once turned on, the monitors record dust concentrations on a 15-minute time-weighted average (TWA). Meteorological data consisting of wind speed, wind direction, temperature, and barometric pressure will be recorded each day to position the monitoring equipment in appropriate upwind and downwind locations. All air monitoring data with time, current activity and the locations of monitoring equipment will be recorded in the on-site files and will be available for review. Meteorological data will be obtained from Weather Underground (<http://www.wunderground.com/>) and recorded daily in the Site logbook.

Air monitoring will consist of continuous real-time air quality monitoring and data collection. Monitoring locations will be upwind, at areas of intrusive site activity, and downwind. The monitoring stations will be linked via EPA’s Viper wireless monitoring system, which will provide instantaneous real-time air quality readings through a computer server. The air monitoring data generated will help to determine if dust suppression activities are effective at maintaining dust levels below the Site-Specific Action Levels. Although air monitoring data from each monitoring station is automatically being stored real-time in a computer server, the air monitoring data will be downloaded from each DataRAM unit to a computer or electronic data storage device at the end of each workday.

Table 2-1: Air Monitoring Specifications

Direct Reading Instrumentation	Monitoring Locations	Monitored Parameters
DataRAMs	<ul style="list-style-type: none">• Perimeter monitoring• Workspace monitoring	Total PM ₁₀ Particulates

2.2 Basis for Establishing the Air Monitoring Action Levels

The community air monitoring program at the Site consists of a combination of perimeter and community monitoring for particulates (dust). The Site-Specific Action Level for PM₁₀ particulates has been based on the EPA National Ambient Air Quality Standards (NAAQS). The

EPA NAAQS for total PM₁₀ over a 24-hour period is 150 micrograms per cubic meter (µg/m³). There is no specified NAAQS listed for particulate matter containing Ra-226 and Ra-228. For this reason, a more conservative approach, of 0.100 mg/m³ (100 µg/m³) 15 minute average over background level, with a maximum of 0.150 mg/m³ (150 µg/m³) 15 minute average over background will be adopted as the Site-Specific particulate Action Level. See Table 2-2 for the air monitoring Action Levels for particulates at the Site.

Table 2-2: Community Air Monitoring Action Levels for Particulates (Direct Reading Instrumentation)

Parameter	Monitoring Locations and Interval	Action Levels (Above Upwind)	Response Activity
Dust (PM ₁₀)	Perimeter and community monitoring locations with dust readings every 60 seconds, calculate 15-minute average during Removal Action activities.	< 100 µg/ m ³	<ul style="list-style-type: none"> • Continue monitoring.
		≥ 100 µg/m ³	<ul style="list-style-type: none"> • Continue monitoring. • Begin dust suppression measures. • Notify field crew that early warning alert level has been reached.
		≥ 150 µg/m ³	<ul style="list-style-type: none"> • Cease activities; re-evaluate dust suppression measures. • Analyze collected air samples for the contaminants of concern. • If during transport and disposal of hazardous waste, commence community air monitoring.

2.3 Non-working Hours

No release of contaminants above background levels is anticipated during non-working hours, therefore, no monitoring will be conducted during that time period.

2.4 Equipment Maintenance and Calibration

All air monitoring equipment will be maintained in accordance with applicable manufacturer recommendations. All pertinent data will be logged in a health and safety logbook (or equivalent) and maintained on site for the duration of site activities. All direct-reading instrumentation will be calibrated in accordance with the manufacturer's instructions.

2.5 Engineering Controls

Dust suppression measures, utilizing a water mist, will be the primary engineering control used during all site intrusive activities. It will be implemented as necessary to prevent the generation of dust during soil excavation and soil handling operations. Water will be used to wet the surfaces of all contaminated soil stockpiles, loading areas, access roads, and areas being excavated as needed.

3.0 AIR SAMPLING

3.1 Air Sampling Procedure

In addition to particulate monitoring, perimeter and community air sampling will be performed using RADēCO H-810 air samplers and will be collocated with or near each DataRAM unit in the field. Each air sampler will contain a 2-inch filter holder with a RADēCO 0750-37 glass fiber air filter. The air samplers will be set to collect air filter samples at a flow rate of 5 cubic feet per minute (cfm) for a target volume of 2,400 cubic feet (cf) over an approximately 8 hour period. Each day, START V will calibrate the air samplers using the RADēCO Air Calibrator Model D-828 prior to deploying them. Calibration readings will be recorded using the RADēCO Model H-810 Calibration Functional Check Form F001. Calibration forms will be reviewed and maintained on-site by the EPA Health Physicist (HP) prior to air sampler being used in the field.

Air filter samples will be collected at a minimum every 4 hours during intrusive site operations (*i.e.* one collected before lunch and another collected after lunch for each air sampler). All air filter samples collected will be placed in a glassine envelop before being placed in a re-sealable plastic bag. Air sampling information, including date, start and stop time, start and ending flow rates, and total volume will be entered into EPA's SCRIBE sample management database by START V. Sample labels generated from the SCRIBE software will be placed on the re-sealable plastic bag for each air sample. All information collected from each air sampler will be documented by START V using Sample Control Form and Chain of Custody Form F002. Documentation associated with the sample including Forms F001 and F002 will be kept with the sample until relinquished to the field measurement personnel.

Upon receipt of the air samples, the field measurement personnel will count each air sample for 10 minutes using a Ludlum Model 3030 (Ludlum-3030). Each sample will be counted at a minimum daily until background levels are reached to ensure high measurements are due to radon and not airborne contamination. Daily air sampling results information will be recorded using the Personnel Air Monitoring and Exposure Estimate Form F003.

Table 3-1: EPA Sampling Procedures

Analyte	Sampling Method	Sampling Media	Recommended Flow Rate (Liters per Minute)*	Total Volume	Site-Specific Action Level
Ra-226	Per EPA HP, utilizing RADēCO Air Sampler	Glass fiber air filter	5 cfm	2,400 cf	$3 \times 10^{-11} \mu\text{Ci}/\text{cm}^3$

*Actual flow rates will be determined in the field based on prevailing Site conditions. Humidity conditions and precipitation events may require air sampling activities to be cancelled for the day.

3.2 Basis for Establishing Air Sampling Action Levels

In order to protect on-site personnel and nearby residences from exposure to site-related contaminants, the Site-Specific Exposure Limit of air concentration for Ra-226 has been set by EPA at 3×10^{-11} microCurie per cubic centimeter ($\mu\text{Ci}/\text{cm}^3$) which is the same allowable air concentration as the public limits. This Exposure Limit was adopted by EPA as the Site-Specific

Risk-Based Action Level. For effective implementation of engineering controls, all air sampling results will be compared with the Site-Specific Risk-Based Action Levels. Most analytical results of air samples collected will be available on site for review the day after sample collection.

Based on air filter sample results, the EPA HP will determine if additional respiratory protection and/or potential administrative or engineering controls are needed, if exposure limits are exceeded. If analytical results of air samples indicate that the Site-Specific Risk-Based Action Levels were exceeded, the cause of the exceedance will be investigated and appropriate corrective actions will be implemented immediately. An evaluation of additional engineering control options, additional off-site air monitoring/sampling and a reduction in daily work hours will also be considered. See Table 3-2 for the Site-Specific Risk-Based Action Levels established for the Removal Action.

Table 3-2: Community Air Sampling Action Levels

Parameter	Sampling Interval and Locations	Action Levels (Above Background)	Response Activity
Contaminants of Concern	Upon initiating intrusive activities and periodically; at perimeter and community monitoring locations	$<3 \times 10^{-11} \mu\text{Ci}/\text{cm}^3$ – Ra-226	<ul style="list-style-type: none"> Continue monitoring PM_{10}.
		$>3 \times 10^{-11} \mu\text{Ci}/\text{cm}^3$ – Ra-226	<ul style="list-style-type: none"> Cease activities; investigate cause. Re-evaluate dust suppression measures. Consider additional off-site air monitoring/sampling. Evaluate site conditions for other engineering control options.

3.3 Non-working Hours

No release of contaminants above background levels is anticipated during non-working hours, therefore, no air sampling will be conducted during that time period.

4.0 REPORTING OF AIR MONITORING AND SAMPLING RESULTS

4.1 Community Notification Procedures

The specific community notification procedures will be at the discretion of the EPA On-Scene Coordinator (OSC). The exact notification procedures will be developed based on the most feasible means of getting information to the surrounding community in an effective, useful, and timely manner.

4.2 On-Site Reporting Procedures

The Site Health and Safety Representative will maintain a sample log and report airborne levels on a daily basis to the EPA OSC. Elevated results (above Action Levels) will be reported immediately to the EPA OSC so that appropriate engineering controls can be implemented to reduce airborne levels.

4.3 Reporting Procedures for Site Employees

Where personal sampling for on-site workers is performed, the contractor will be responsible for informing employees and subcontractors of their monitoring results to comply with Occupational Safety and Health Administration (OSHA) regulations and good occupational health practices. Within five working days after the receipt of monitoring results, the Contractor will notify each employee of the results representing that employee's level of exposure.

Whenever the results indicate that employee exposure exceeds the OSHA Permissible Exposure Limits (PELs)/EPA Risk-Based Action Level, notification shall be provided to the affected employee stating that the OSHA PEL/EPA Risk-Based Action Level was exceeded and providing a description of the corrective action taken to reduce exposures to a level below the OSHA PELs/EPA Risk-Based Action Level.

4.4 Reporting Procedures for the Analytical Laboratory

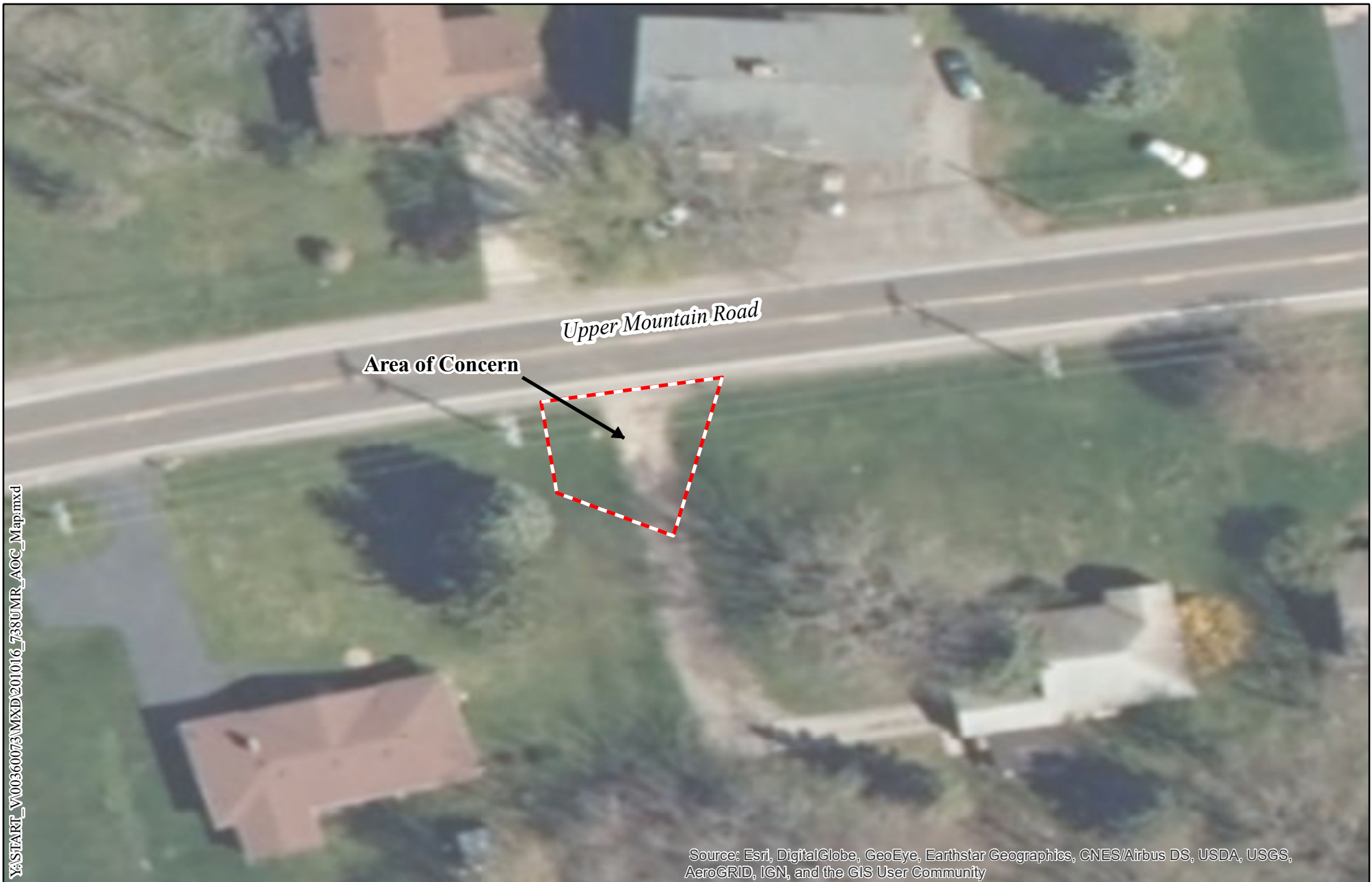
Although air samples will be analyzed on-site and not by an analytical laboratory, chain-of-custody (COC) procedures will be followed during sample handling and submission to field measurement personnel for analysis. Areas sampled, tasks performed, duration, volumes, and analytical results will be available on-site for review and an air sampling report will be provided by START V upon completion of the Removal Action. Sampling and analysis will be performed in accordance with the appropriate EPA method under the direction of the EPA OSC.

4.5 Data Review and Interpretation


The general public will be able to review the captured data for the Site once the air sampling data has been validated and finalized, and based upon the EPA OSC's authorization for release of the information. Monitoring records will be maintained on site.

ATTACHMENT A

Area of Concern Map



Legend

 Area of Concern

0 20 40 80 120 160 Feet



Weston Solutions, Inc.
Federal East Division

In Association With
Eco-Risk; Avatar Environmental, LLC;
Pro-West & Associates, Inc.;
On-Site Environmental, Inc.;
and Sovereign Consulting, Inc.

Figure 1:

Area of Concern Map

738 UPPER MOUNTAIN ROAD
LEWISTON, NEW YORK

U.S. ENVIRONMENTAL PROTECTION AGENCY
SUPERFUND TECHNICAL ASSESSMENT
& RESPONSE TEAM V
CONTRACT # 68HE0319D0004

DATE MODIFIED: 10/16/2020
GIS ANALYST: M. LANG
EPA OSC: P. LISICHENKO
START V SPM: S. QUINN
FILENAME: 201016_738UMR_AOC_Map.mxd

ATTACHMENT B

EPA Air Sampling Forms

RADēCO Model H-810 Calibration Functional Check Form F001

Sample Control Form and Chain of Custody Form F002

Personnel Air Monitoring and Exposure Estimate Form F003



F001, RADeCO Model H-810 Calibration Functional Check Form

SECTION 1: INSTRUMENT DATA

Air Sampler Make:

Air Sampler Model:

Air Sampler S/N:

Air Sampler Calibration Due:

Air Filter Type:

Air Filter Size:

Flow Calibrator S/N:

Flow Calibrator Calibration Due:

SECTION 2: CALIBRATION DATA

Physical Condition of Instrument (circle one):

Satisfactory

Unsatisfactory

LINEARITY VERIFICATION

Reference (CFM)	Calibrator Flow (CFM)	Sampler Flow (CFM)	Comments
1.0			
2.0			
3.0			
4.0			
5.0			
6.0			

CALIBRATION RANGE		ENVIRONMENTAL CONDITIONS	
High Flow:	CFM	Temperature:	°F
Mid Flow:	CFM	Humidity:	%
Low Flow:	CFM	Pressure:	inches Hg
COMMENTS:			

Calibrated By:

Date:

Reviewed By:

Date:

Calibration Due:

SAMPLE CONTROL FORM & CHAIN OF CUSTODY

SCF -

☐ TABLET - Sample information entered on Tablet

Sampling Information (to be filled out by the Field Team)

Field Team:		Collector's Name:		Home Org:	
Longitude:		Location Description:			
Latitude:					
Collection Date:	Collection Time (24hr):	Area Exposure Rate:	Contact Dose Rate:		
Collection Comments:					

Sample Type (use only once)	Air	Sampler ID #		Type:	Filter size & Type: <input type="checkbox"/> Paper <input type="checkbox"/> Cartridge <input type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> Other		
		Date/Time ON:		Date/Time OFF:		OR	Total Volume: units:
		Start Flow Rate units		Stop Flow Rate units			
		Additional Air Filter, Provide Sample #					
	Milk	<input type="checkbox"/> Cow <input type="checkbox"/> Goat <input type="checkbox"/> Other:		<input type="checkbox"/> Stored Feed <input type="checkbox"/> Pasture <input type="checkbox"/> Other:			
		Milking Date:		Milking Time:		Number of Animals	
	Soil	Depth of soil sample: cm		Vegetation collected with soil sample? <input type="checkbox"/> If "YES" check box if "NO" leave blank			
		Sample surface area: cm ²		If vegetation in separate container, provide sample #:			
	Water	<input type="checkbox"/> Surface <input type="checkbox"/> Ground / Well <input type="checkbox"/> Potable / Tap <input type="checkbox"/> Other:					
	Other	<input type="checkbox"/> Food <input type="checkbox"/> Feed <input type="checkbox"/> Instrument <input type="checkbox"/> Swipe <input type="checkbox"/> Other:				Description:	
Sample Area (cm): L W H							

Sample Receiving (to be filled out by sample control & hotline technician)

Processing Priority:	<input type="checkbox"/> Urgent	<input type="checkbox"/> Duplicate	<input type="checkbox"/> Split	<input type="checkbox"/> Composite	<input type="checkbox"/> Blank
Receipt Contact Dose Rate uR/hr:	<input type="checkbox"/>	Contamination Check: Forms and sample bags surveyed.		Weight of Sample gram	
Analysis Requested:					
Remarks/Special Instructions					

Custody Transfer (Signatures)

Relinquished By:	Date/Time	Received By:	Date/Time
Relinquished By:	Date/Time	Received By:	Date/Time
Relinquished By:	Date/Time	Received By:	Date/Time
Relinquished By:	Date/Time	Received By:	Date/Time

Original with Sample

Copy to Sample Control

October 2011

SAMPLE CONTROL & CHAIN - OF - CUSTODY FORM

Field	Data
Tablet	Check if "Sample Information" is recorded using MPCD Tablet. Only Chain-of-Custody is needed.
SCF -	If no Barcode or Sample Control Number, then create one (SCF-XXXXX).
Collection Team ID	Enter Team Name or Number.
Collector's Name	Enter Collectors Name (Can be team captain).
Org	Enter Collectors Home Organization.
Location Description	Enter a description of the sample location. This can be an address with a description of the location in relation to local landmarks (i.e. near stop sign).
Latitude/Longitude	Estimated from map or read from GPS. The preferred format is degrees and decimal degrees. (i.e., Longitude = -108°.27976).
Collection Date	Enter the "Date" the Sample was Collected (dd-mmm-yyyy 02SEP2009). For air or composite samples this is the "Date Off" (end date of collection period).
Collection Time	Enter the Time the Sample was Collected (24 hour clock). For composite samples this is the "Time Off" (end time of collection period).
Area Exposure Rate	Record the average area Exposure Rate where the sample is to be collected.
Contact Dose Rate	If background permits, then enter the dose rate at contact with the sample container.
Collection Comments	Enter any pertinent information on the collection process (i.e. unusual occurrences).
Sample Type	Complete the appropriate "Sample Type". Use only one sample per form.
Air Sample	Enter Air Sampler ID, Type and Filter Size, Date On & Off (dd-mmm-yyyy), Time On & Off (24hr). Enter either Start & Stop Flow Rate or Total Volume and Units.
Additional Air Filter, Provide Sample #	Enter additional Air Sample # for each separate Air Filter Matrix taken at same location. (i.e. Paper & Charcoal Cartridge)
Milk Sample	Check the "Type" of milk sampled. If "Other", describe. Enter the "Feed Type" the cattle eat. If "Other", describe in the remarks. Enter Milking Date (dd-mmm-yyyy) & Time (24hr)
Soil Sample	Enter Depth of soil sample in centimeters. Enter the surface area sampled in centimeters ² (square centimeters). If a separate vegetation sample was collected indicate so and enter the sample number of the SCF for the vegetation sample. DO NOT ENTER TWO SAMPLES ON A SINGLE SCF.
Water Sample	Check the "Source" of the water sample. If "Other", describe.
Other	Check the sample type Food – Human Consumption, Feed – Animal Consumption, "Instrument" (Spectra to be saved in RAMS), "Swipe" or "Other"
Sample Area (cm)	Record the Area the Vegetation or Swipe Sample was taken from (Length, Width and Height).
Description	Enter the description of sample and the size or volume of sample (i.e. Vegetation 1-gal sealable bags grass, Swipe 100 cm ²).
Processing Priority	Identify Rush (Priority or Urgent) samples designated by the monitoring manager. 1 is high priority.
Duplicate Sample #	A duplicate sample is a second sample collected at the same location. Create duplicate paperwork and assign a new sample number to the duplicate and record the other sample number here.
Split Sample#	A split sample is a single sample collection split into two sample containers. Create duplicate paperwork and assign a new sample number to the split sample and record the new sample number here.
Receipt Contact Dose Rate	Samples are checked for activity as they pass through the hot line. Record the instrument reading and units.
Contamination Check	Check exterior of sample bags and forms for contamination. This step is performed at the hot line.
Weight of Sample	Record the Weight of Soil, Water & Vegetation Samples.
Analyses Requested	Record analysis requested by Assessment or Monitoring and Sampling Supervisors if known.
Remarks/Special Instructions	Enter any special instructions (i.e., homogenize sample). Indicate whether the sample must be prepared before being forwarded to the laboratory. Enter unusual circumstances discovered during sample receipt. Does not include problems recorded on the Non-Conformance Memo.
Relinquished by	Signed by person releasing custody of the sample. The custody must be relinquished to a person or secured area
Date/Time	Date and Time (24 hr) custody transferred
Received by	Signed by the person receiving the sample



F003 Personnel Air Monitoring and Exposure Estimates

Air Sampling Data

Sample collector _____
Sample start time _____
Sample flow _____
Sample Volume _____

Location _____ Date _____
Sample end time _____

Isotope _____ ☐ Alpha ☐ Beta ☐ Gamma DAC _____
Isotope _____ ☐ Alpha ☐ Beta ☐ Gamma DAC _____

Counting Data

Counter Type ☐ Ludlum 2929 ☐ Ludlum 3030 ☐ Other _____

Sample ID# _____ Date/ time sample collected _____
Sample submitted by _____ Date/time _____
Sample received by _____
Date/ time sample counted _____
Sample disposition _____

Background count time _____ Alpha _____ cpm Beta _____ cpm
Date/time first count: _____ Alpha _____ cpm Beta _____ cpm
Date/time followup: _____ Alpha _____ cpm Beta _____ cpm
Date/time followup: _____ Alpha _____ cpm Beta _____ cpm
Date/time followup: _____ Alpha _____ cpm Beta _____ cpm

Volume (cf)	Isotope	DAC	Count time	Bkg	Gross Alpha	Net Alpha	Net Count Rate	Air Conc	Fractional DAC
Volume (cf)	Isotope	DAC	Count time	Bkg	Gross Beta	Net Beta	Net Count Rate	Air Conc	Fractional DAC

Total fractional DAC _____

Exposure Estimates

EPD #	Exposure Time	Fractional DAC	DAC hrs	Respiratory Protection Factor	Adjusted DAC hrs	Projected Dose

Analyzed By _____ Date _____ Reviewed by _____ Date _____

When this form is completed with personnel names and exposure information, it becomes a confidential record and may be protected IAW Privacy Act 1974 or Health Insurance Privacy Portability Act.